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■ Case Report

Suspected Ovarian Malignancy in HIV Positive Woman Might Just be Abdominal Tuberculosis: Reports of Two Cases

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ABSTRACT

Abdominal extrapulmonary tuberculosis (EPTB) responds well to medical treatment. The cases present with features which may be non-specific simulating other diseases like ovarian cancers leading to unnecessary surgery. The EPTB is common among HIV-TB co-infected population. We report cases of abdominal EPTB among 2 HIV positive women mimicking cancer of ovary. Case one was a 41-year-old multiparous HIV positive woman with painless abdominal swelling of a month. Abdomen was distended with ascites and palpable abdominopelvic mass of about 14 weeks size confirmed as a right ovarian 9.8cm x 8.2cm mass on ultrasonography. Investigations showed marked lymphocytosis and CA-125 value of 1095 U/ml. Intraoperatively, there was widespread peritoneal and omental military nodules with adhesion of the colon with the uterus. Histology of specimen showed caseating granulomatous lesion with necrotizing inflammation and cytology of ascitic fluid showed admixture of neutrophil polymorphs, lymphocytes, and macrophages with no malignant cells. She had anti-tuberculosis and responded satisfactorily to the treatment. The second case was a 50-year-old grand-multiparous with recurrent abdominal swelling one month after surgery for suspected ovarian cancer in a private hospital. The histology of surgical specimen did not show malignant cells. The abdomen was distended with ascites and firm irregular 12-14 weeks suprapubic mass confirmed from ultrasonography as a left adnexal complex mass. The Mantoux test and HIV screening were positive. She was treated with anti-tuberculous and antiretroviral drugs with satisfactory improvement. **Conclusion:** With the high prevalence of HIV-TB co-infection in our environment, the possibility of abdominal tuberculosis should be considered

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in HIV positive patients with abdominal mass. This diagnosis should be high in our differentials and use of ancillary investigations can be helpful in resolving this diagnosis to avoid unnecessary surgical interventions.

Keywords: Abdominal tuberculosis, mimic ovarian cancer, CA125, ascites, adnexal mass.

Introduction

Tuberculosis (TB) is an infectious disease with primary pulmonary affection. However, extrapulmonary tuberculosis (EPTB) are commonly reported annually.¹ Tuberculous meningitis is the gravest manifestation of EPTB and abdominal tuberculosis the most frequent at 12% globally.¹ Abdominal EPTB are common in countries where cases of HIV-TB co-infections are prevalent.² This can pose diagnostic and therapeutic dilemma in women because the symptoms of abdominal EPTB can greatly mimic other pathologies³ such as Crohn's disease, lymphoma and ovarian malignancy due to the non-specific symptoms associated with these conditions.³ We present cases of two patients referred to our gynaecology oncology clinic with abdominal TB mimicking ovarian malignancy.

Case Report 1

A 41-year-old para 2 +0 2 alive teacher known HIV positive who presented with a month history of painless progressive abdominal swelling. There was no personal history or contact with person with chronic cough, weight loss or change in bowel habit. Her latest viral load and CD4 counts a month earlier was 20 copies/ml and 581 cells/ul, respectively. Examination showed anxious woman that was not pale and no lymphadenopathy nor pedal oedema. The non-tender abdomen was mildly distended with ascites with almost absent bowel sounds on auscultation. She had hepatomegaly of 4cm below the right costal margin. There was about 14 weeks size non-tender abdominopelvic mass. Pelvic examination revealed 8 weeks size uterus with marked discomfort on right full adnexa and Pouch of Douglas. Abdominopelvic ultrasound revealed marked ascites and a right 9.8cm x 8.2cm ovarian mass.

Her packed cell volume (PCV) was 32% and white blood cell count $11.8 \times 10^9/l$ with lymphocyte of 68% and neutrophil of 32%. Liver and renal function test results were normal. A serum CA-125 assayed showed elevated values of 1095 U/ml. There was no abnormality detected on chest radiograph. A pre-operative diagnosis of possible ovarian malignancy was made. At surgery, there were widespread peritoneal and omental military nodules with bowels adherent to the fundus of the uterus. The patient had total abdominal hysterectomy (TAH), bilateral salpingectomy, right oophorectomy, excision of right broad ligament cyst and drainage of about 6 litres of strawcoloured ascitic fluid. Histology of surgical specimen showed chronic caseating granulomatous tissue with necrotizing inflammation and cytology of ascitic fluid showed admixture of neutrophil, lymphocytes, and macrophages, no malignant cells but. She was referred to gastroenterology physicians and commenced on anti-tuberculosis therapy of isoniazid, rifampicin, ethambutol and pyrazinamide based on the Nigerian National TB control guideline. She responded satisfactorily to the treatment and has remained stable and attending her antiretroviral clinic for her HIV disease.

Case Report 2

A 50-year-old Para 11^{+0,6} alive farmer who presented with recurrent generalized abdominal swelling of a year and history of abdominal surgery in a private hospital one month earlier on account of suspicion of ovarian cancer the histology of which was reported as not showing malignant cells. There was associated progressive weight loss, loss of appetite and early satiety. There was no cough or night sweat. Examination showed that she was pale but not jaundiced with no lymphadenopathy or

pedal oedema. The abdomen was distended with ascites with prominent superficial veins, healed Pfannenstiel scar and firm irregular 12-14 weeks suprapubic mass. Pelvic examination revealed smooth cervix, 14 weeks sized abdominopelvic mass that was not easily separable from the uterus with fullness of the left adnexum, and flat Pouch of Douglas. Abdominopelvic ultrasonography showed a left adnexal complex mass and moderate ascites. Her PCV was 30% and marked

lymphocytosis of 72%. Mantoux test reading was 9mm x 8mm. The chest radiograph was normal. She tested positive to HIV-1 with CD4 count of 381cells/ul. A diagnosis of abdominal tuberculosis in HIV positive woman was made. She was commenced on anti-tuberculous therapy and antiretroviral treatment (ART) two weeks later. Patient responded well to treatments with resolution of left adnexal mass and ascites.

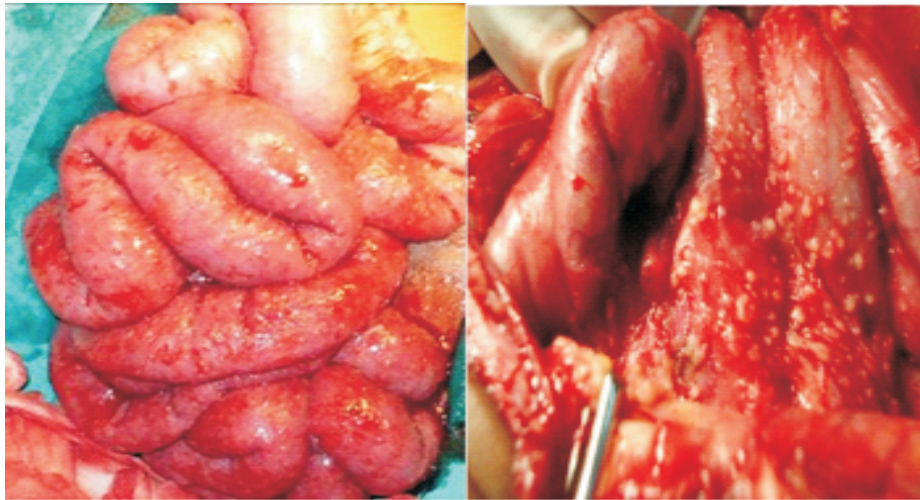


Fig. 1a: Intraabdominal findings at surgery in a case of abdominal tuberculosis. Note the miliary seedlings on peritoneum and serosal surface of bowel with dense adhesions

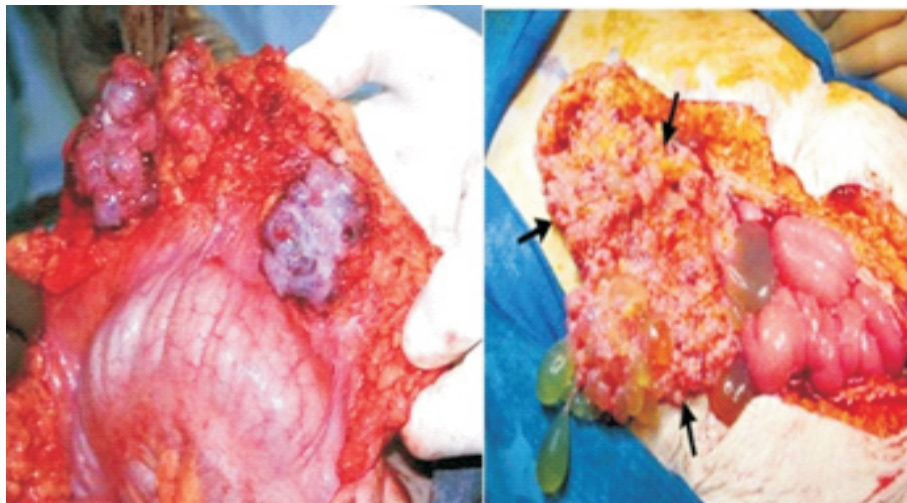


Fig. 1b: Intraabdominal findings at surgery in a case of ovarian cancer. Note the metastases involving the omentum

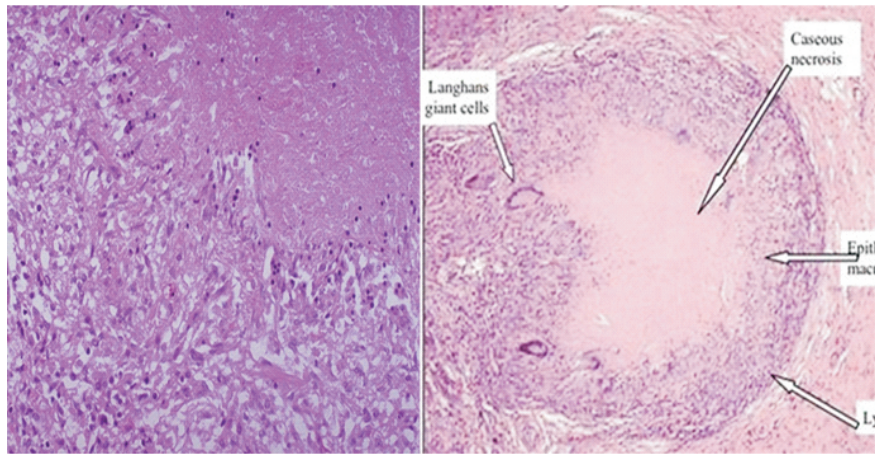


Fig. 2a:⁵ Microscopic appearance of caseous necrosis found in specimen from a patient with abdominal tuberculosis. Note the pink, amorphous region in the center of the granuloma and ringed by epithelioid cells

Discussion

These 2 cases demonstrated HIV positive women with intra-abdominal tuberculosis mimicking ovarian malignancy. Abdominal tuberculosis, though can masquerade other conditions with similar symptoms, accounts for 15-20% of EPTB in women.⁴ Tuberculosis though spreads to the abdomen from focuses like lungs by haematogenous spread, lymphatic, mesenteric lymph nodes and, rarely, primary inoculation from tuberculous lesion on male partner genitalia during sexual intercourse can also occur.⁴ Intra-abdominal structures commonly affected include peritoneum, fallopian tubes, uterus and ovaries.⁵ Our patients had involvement of mainly genital structures which account for over 80% of cases of intra-abdominal EPTB.⁴

The global pandemic of HIV-TB co-infection has been associated with increasing presentation of EPTB especially in developing countries where such associations are common.¹ The HIV infection in our cases is a risk factor for the abdominal EPTB and the female gender, for the predominant genital affectations.⁶ The alteration in immunity in HIV-TB co-infection facilitates EPTB which is usually miliary (Fig.1a).

These patients presented with non-specific symptoms of ascitic abdominal distension and adnexal masses making diagnosis similar for

ovarian malignancy. Though the assayed serum CA-125, a commonly utilized tumour biomarker in ovarian cancer, in case one was high at 1095 U/ml, it was not discriminatory enough due to its non-specificity.⁸ CA-125 can be elevated in other conditions like tuberculosis.

We performed TAH in case one despite the intraabdominal findings suggestive of abdominal tuberculosis (Fig. 1a) rather than ovarian cancer (Fig.1b) because the woman has completed her family and her consent was obtained. The left ovary that was not involved in the pathology was preserved to prevent her prolonged exposure to menopausal risks.⁷ The histological findings (Fig. 2a) confirmed the diagnosis in case one. The need to utilize tests to improve diagnostic specificity was demonstrated in case 2 where result of the Mantoux test was helpful in non-surgical diagnosis.

Conclusion

We reported 2 cases of abdominal tuberculosis in HIV positive women mimicking cancer of ovary. The lesson learned from the first case improved the diagnostic evaluation of the second case. The possibility of abdominal tuberculosis should be considered in HIV positive patients in our setting where cases of TB-HIV co-infection is common.⁸ This will lead to avoidance of unnecessary surgical interventions in managing such patients.

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